Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier
3M ™ Adhesive LS Cartridge DS-2072

Product Identification Numbers
98-0212-3436-8
7010400196

1.2. Recommended use and restrictions on use

Recommended use
Adhesive

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Advanced Materials Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Acute Toxicity (oral): Category 4.
Acute Toxicity (dermal): Category 4.
Serious Eye Damage/Irritation: Category 2A.

2.2. Label elements
Signal word
Warning

Symbols
Exclamation mark |

Pictograms



Hazard Statements
Harmful if swallowed.
Harmful in contact with skin.
Causes serious eye irritation.

Precautionary Statements

Prevention:
Wear protective gloves, protective clothing, and eye/face protection.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.

Response:
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water.
Take off contaminated clothing and wash it before reuse.
Rinse mouth.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
Call a POISON CENTER or doctor/physician if you feel unwell.

Disposal:
Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

99% of the mixture consists of ingredients of unknown acute oral toxicity.
99% of the mixture consists of ingredients of unknown acute dermal toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Benzenesulfonic acid, dodecyl-, branched, sodium salt	69227-09-4	< 2 Trade Secret *
Water	7732-18-5	<= 1
ISOOCTYL ACRYLATE	29590-42-9	<= 0.5
Acrylonitrile	107-13-1	< 0.1
Acrylate copolymer	Trade Secret*	>= 96

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:
Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:
Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If Swallowed:
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
No critical symptoms or effects. See Section 11.1, information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Sulfide	During Combustion
Oxides of Sulfur	During Combustion

5.3. Special protective actions for fire-fighters
Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid eye contact. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage including any incompatibilities
No special storage requirements.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Acrylonitrile	107-13-1	ACGIH	TWA:2 ppm	A3: Confirmed animal carcin., Danger of cutaneous absorption
Acrylonitrile	107-13-1	OSHA	TWA:2 ppm;STEL:10 ppm	29 CFR 1910.1045, SKIN
ISOOCTYL ACRYLATE	29590-42-9	AIHA	TWA:37.5 mg/m3(5 ppm)	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Safety Glasses with side shields
Indirect Vented Goggles

Skin/hand protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.
Gloves made from the following material(s) are recommended: Nitrile Rubber

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	
Physical state	Solid
Color	Brown
Specific Physical Form:	Solid gel
Odor	Slight Acrylate
Odor threshold	*No Data Available*
pH	*Not Applicable*
Melting point	*No Data Available*
Boiling Point	*Not Applicable*
Flash Point	No flash point
Evaporation rate	*Not Applicable*
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	*Not Applicable*
Vapor Density	*Not Applicable*
Density	1.01 g/cm3
Specific Gravity	1.01 [*Ref Std:*WATER=1]
Solubility in Water	Negligible
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*No Data Available*
Decomposition temperature	*No Data Available*
Viscosity	*Not Applicable*
Volatile Organic Compounds	*No Data Available*
Percent volatile	<=3 %
VOC Less H2O & Exempt Solvents	*No Data Available*

SECTION 10: Stability and reactivity

10.1. Reactivity
This material is considered to be non reactive under normal use conditions.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
None known.

10.5. Incompatible materials
None known.

10.6. Hazardous decomposition products

Substance	Condition
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin Contact:
Harmful in contact with skin. Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Eye Contact:
Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion:
Harmful if swallowed. Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Additional Information:
The health hazards of this material are not completely known. Conservative safe handling measures should be followed (as described in sections 7 and 8), and appropriate first aid measures (as described in section 4) should be taken if exposure occurs.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >1,000 - =2,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >300 - =2,000 mg/kg
Benzenesulfonic acid, dodecyl-, branched, sodium salt	Ingestion	Rat	LD50 520 mg/kg
Benzenesulfonic acid, dodecyl-, branched, sodium salt	Dermal	similar compounds	LD50 >1000, <1600 mg/kg
ISOOCTYL ACRYLATE	Dermal	Rabbit	LD50 > 2,000 mg/kg
ISOOCTYL ACRYLATE	Ingestion	Rat	LD50 > 5,000 mg/kg
Acrylonitrile	Dermal	Rabbit	LD50 226 mg/kg
Acrylonitrile	Inhalation-Vapor (4 hours)	Rat	LC50 2 mg/l
Acrylonitrile	Ingestion	Rat	LD50 93 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value

Benzenesulfonic acid, dodecyl-, branched, sodium salt	similar compounds	Irritant
ISOOCTYL ACRYLATE	In vitro data	No significant irritation
Acrylonitrile	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
Benzenesulfonic acid, dodecyl-, branched, sodium salt	similar compounds	Corrosive
ISOOCTYL ACRYLATE	similar health hazards	Mild irritant
Acrylonitrile	Rabbit	Corrosive

Skin Sensitization

Name	Species	Value
Benzenesulfonic acid, dodecyl-, branched, sodium salt	similar compounds	Not classified
ISOOCTYL ACRYLATE	Mouse	Sensitizing
Acrylonitrile	Human and animal	Sensitizing

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Benzenesulfonic acid, dodecyl-, branched, sodium salt	In Vitro	Not mutagenic
ISOOCTYL ACRYLATE	In Vitro	Some positive data exist, but the data are not sufficient for classification
Acrylonitrile	In Vitro	Some positive data exist, but the data are not sufficient for classification
Acrylonitrile	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
ISOOCTYL ACRYLATE	Dermal	Mouse	Not carcinogenic
Acrylonitrile	Ingestion	Rat	Carcinogenic
Acrylonitrile	Inhalation	Rat	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
ISOOCTYL ACRYLATE	Dermal	Not classified for female reproduction	Rat	NOAEL 57 mg/kg/day	premating & during gestation
ISOOCTYL ACRYLATE	Dermal	Not classified for male reproduction	Rat	NOAEL 57 mg/kg/day	premating & during gestation
ISOOCTYL ACRYLATE	Dermal	Not classified for development	Rat	NOAEL 57 mg/kg/day	premating & during

					gestation
ISOOCTYL ACRYLATE	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	during organogenesis
Acrylonitrile	Ingestion	Not classified for female reproduction	Rat	NOAEL 35 mg/kg/day	3 generation
Acrylonitrile	Ingestion	Not classified for male reproduction	Mouse	LOAEL 10 mg/kg/day	60 days
Acrylonitrile	Inhalation	Not classified for development	Rat	NOAEL 0.09 mg/l	during organogenesis
Acrylonitrile	Ingestion	Toxic to development	Rat	NOAEL 25 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Benzenesulfonic acid, dodecyl-, branched, sodium salt	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	
ISOOCTYL ACRYLATE	Inhalation	respiratory irritation	Not classified	Human	NOAEL Not available	occupational exposure
ISOOCTYL ACRYLATE	Ingestion	central nervous system depression	Not classified	Rat	NOAEL 5,000 mg/kg	
Acrylonitrile	Dermal	nervous system	Causes damage to organs	Human	NOAEL Not available	occupational exposure
Acrylonitrile	Inhalation	nervous system	Causes damage to organs	Human	NOAEL Not available	occupational exposure
Acrylonitrile	Inhalation	liver	May cause damage to organs	Human	NOAEL Not available	occupational exposure
Acrylonitrile	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	occupational exposure
Acrylonitrile	Inhalation	heart	Not classified	Human	NOAEL Not available	poisoning and/or abuse
Acrylonitrile	Inhalation	blood	Not classified	Human	NOAEL Not available	occupational exposure
Acrylonitrile	Ingestion	nervous system	Causes damage to organs	Rat	NOAEL Not available	
Acrylonitrile	Ingestion	endocrine system	May cause damage to organs	Rat	NOAEL Not available	
Acrylonitrile	Ingestion	blood	Not classified	Multiple animal species	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Benzenesulfonic acid, dodecyl-, branched, sodium salt	Ingestion	liver | heart | endocrine system | gastrointestinal tract | hematopoietic system | immune system | muscles | nervous system | kidney and/or bladder | respiratory system | vascular system	Not classified	Rat	NOAEL 250 mg/kg/day	12 weeks
ISOOCTYL ACRYLATE	Dermal	heart | endocrine system | hematopoietic system | liver | immune system |	Not classified	Rat	NOAEL 57 mg/kg/day	premating & during gestation

		nervous system | kidney and/or bladder | respiratory system				
ISOOCTYL ACRYLATE	Ingestion	endocrine system | liver | kidney and/or bladder | heart | bone, teeth, nails, and/or hair | hematopoietic system | immune system | muscles | nervous system | eyes | respiratory system | vascular system	Not classified	Rat	NOAEL 600 mg/kg/day	90 days
Acrylonitrile	Inhalation	nervous system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Acrylonitrile	Inhalation	respiratory system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 0.045 mg/l	2 years
Acrylonitrile	Inhalation	heart | kidney and/or bladder	Not classified	Rat	NOAEL 0.18 mg/l	2 years
Acrylonitrile	Inhalation	gastrointestinal tract	Not classified	Human	NOAEL Not available	
Acrylonitrile	Inhalation	blood | liver | immune system	Not classified	Human	NOAEL Not available	occupational exposure
Acrylonitrile	Ingestion	nervous system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 25 mg/kg/day	12 weeks
Acrylonitrile	Ingestion	endocrine system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 14 mg/kg/day	60 days
Acrylonitrile	Ingestion	liver	Not classified	Rat	NOAEL 25 mg/kg/day	2 years
Acrylonitrile	Ingestion	heart	Not classified	Rat	NOAEL 14 mg/kg/day	2 years
Acrylonitrile	Ingestion	blood	Not classified	Rat	LOAEL 14 mg/kg/day	2 years
Acrylonitrile	Ingestion	kidney and/or bladder	Not classified	Multiple animal species	NOAEL Not available	not available
Acrylonitrile	Ingestion	respiratory system	Not classified	Rat	NOAEL 25 mg/kg	2 years

Aspiration Hazard
For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations
Contact 3M for more information.

EPCRA 311/312 Hazard Classifications:

Physical Hazards
Not applicable

Health Hazards
Acute toxicity
Serious eye damage or eye irritation

15.2. State Regulations
Contact 3M for more information.

15.3. Chemical Inventories
The components of this product are in compliance with the new substance notification requirements of CEPA.

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of Japan Industrial Safety and Health Law. Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

Contact 3M for more information.

15.4. International Regulations
Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 2 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification
Health: 2 **Flammability:** 1 **Physical Hazard:** 0 **Personal Protection:** X - See PPE section.

Hazardous Material Identification System (HMIS® IV) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® IV ratings are to be used with a fully implemented HMIS® IV program. HMIS® is a registered mark of the American Coatings Association (ACA).

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